

Designed _____	Date _____
Drawn <u>TJA</u>	<u>06/23/06</u>
Checked _____	_____
Approved by _____	_____

\_\_\_\_\_ COUNTY, PENNSYLVANIA

2' HIGH, 8" L-WALL (W/SURCHARGE)

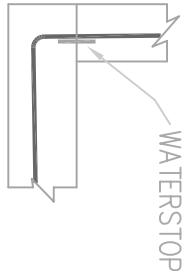
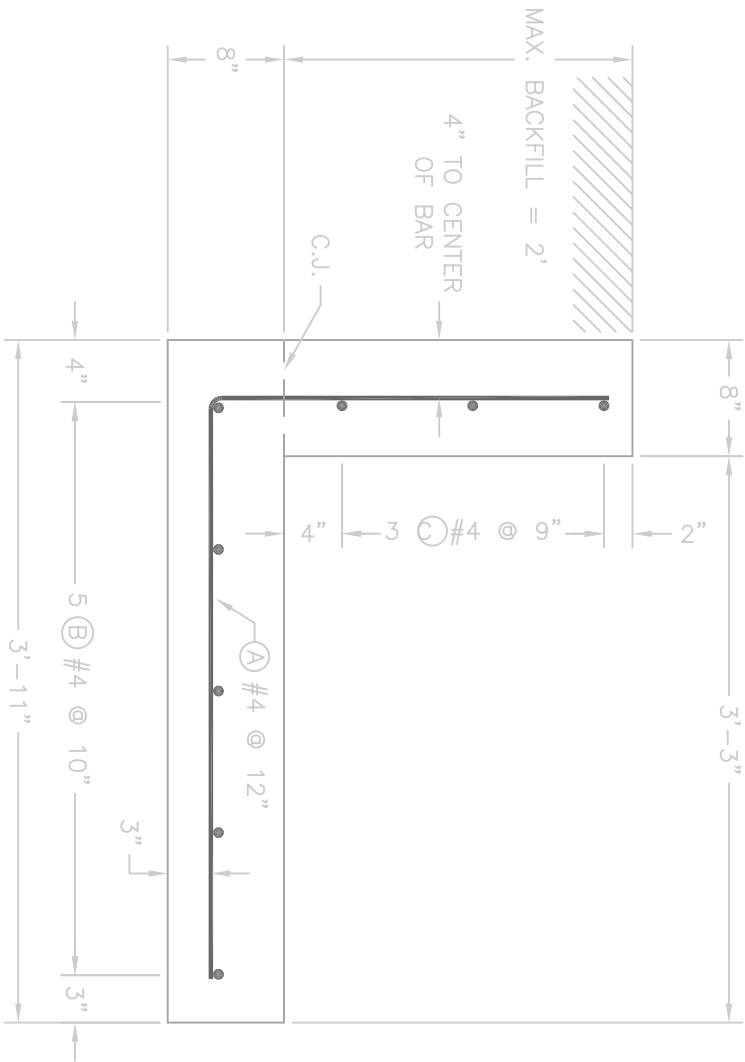


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Sheet: \_\_\_\_\_ of \_\_\_\_\_

C.J. = CONSTRUCTION JOINT

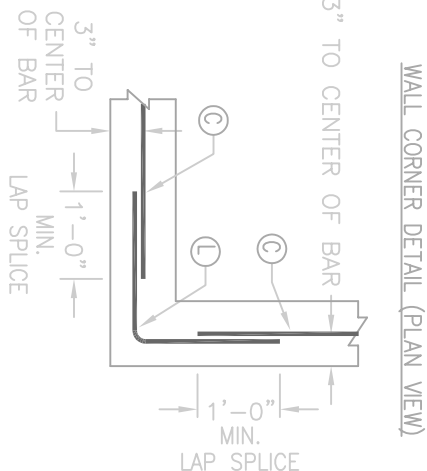
LIQUID-TIGHT JOINT \_\_\_\_ YES \_\_\_\_ NO

## LIQUID-TIGHT JOINT OPTIONS

- 1) NON-METALIC WATERSTOP (PVC)
- 2) HYDROPHILIC WATERSTOP

## CONSTRUCTION JOINT OPTIONS

1. IF SLAB AND WALL ARE POURED SEPARATELY, THE SLAB SURFACE MUST BE THOROUGHLY CLEANED WITH WATER AND A WIRE BRUSH. THE SURFACE OF THE JOINT SHALL BE KEPT MOIST FOR AT LEAST 1 HOUR PRIOR TO PLACEMENT OF NEW CONCRETE.
2. THE SLAB AND WALL MAY BE POURED AT THE SAME TIME ELIMINATING THE NEED FOR A CONSTRUCTION JOINT.



SLAB CORNER DETAILS SEE PA-023  
RESTRAINING SLAB OPTIONS SEE PA-024

GENERAL DESIGN NOTES:

- DRAINAGE SHALL BE AWAY FROM THE WALL.
- THE MINIMUM WIDTH OF THE BACKFILL AGAINST THE WALL SHALL BE EQUAL TO OR GREATER THAN THE BACKFILL HEIGHT.
- MAXIMUM FOOTING CONTACT PRESSURE IS 410 psf/ft.

DESIGN STRENGTHS: WORKING STRESS DESIGN

- CONCRETE  $f'_c = 4,000$  psi
- STEEL  $f_s = 20,000$  psi (GRADE 40)

### WALL DESIGN LOADING: 313 STANDARD – LATERAL EARTH PRESSURE VALUES

- MANURE LOAD INSIDE = 65 psf/ft.  
SOIL BACKFILL LOAD OUTSIDE = 60 OR 75 psf/ft.  
SURCHARGE LOAD = 120 psf  
SOIL BACKFILL DENSITY = 110 pcf.  
WATER TABLE MUST BE BELOW THE FOOTING ELEVATION

### WALL RESTRAINT REQUIREMENTS:

- 5" THICK SLAB, SAFETY FACTOR AGAINST SLIDING 1.5 MIN

BACKFILL HEIGHT (OUTSIDE LOAD)	SLAB LENGTH NO INSIDE LOAD EFP=60 EFP=75	SLAB LENGTH FULL INSIDE LOAD
2 FEET	17 FEET	NO SLAB
1 FOOT	5 FEET	NO SLAB
0 FEET	NO SLAB	NO SLAB

THIS STANDARDIZED DESIGN MUST BE ADAPTED TO THE SPECIFIC SITE. IT WAS DEVELOPED IN COOPERATION WITH THE WISCONSIN DEPARTMENT OF AGRICULTURAL, TRADE AND CONSUMER PROTECTION. THE DESIGN FOLDER IS FILED AT THE NRS STATE OFFICE, 8030 EXCELSIOR DRIVE, MADISON, WI. 53717-2906

NOTES:

1. DIMENSIONS ARE TO THE REINFORCING BAR SURFACE UNLESS OTHERWISE NOTED.
2. BACKFILL TO THE TOP OF THE WALL IS RECOMMENDED FOR FROST PROTECTION.

[illegible]

## STEEL SCHEDULE

TOTAL LENGTH OF WALL \_\_\_\_\_ FT.



## ESTIMATED QUANTITIES

CONCRETE (0.1461 CU.YDS./LIN.FT.) \_\_\_\_\_ CU.YDS.  
STEEL #4 (0.668 LBS./FT) \_\_\_\_\_ LBS.

- CONCRETE SHALL MEET PA 313 OR 561 SPECIFICATION REQUIREMENTS
- SUBSTITUTION OF GRADE 60 BARS IS PERMITTED.
- MINIMUM SPLICE LENGTH FOR MARK **(B)** AND **(C)** BARS IS 12"
- STEEL QUANTITY DOES NOT INCLUDE SPLICE LENGTHS.